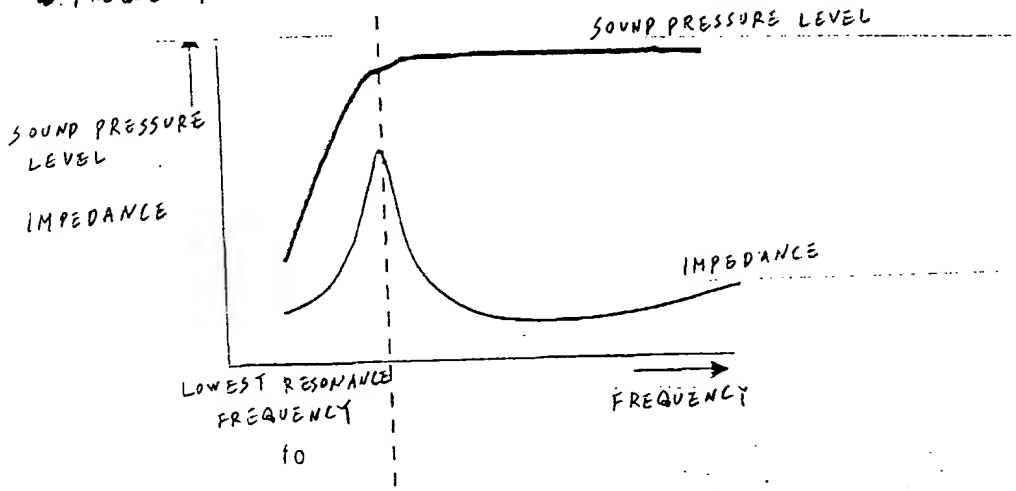
Attorney Docket No. Q62174
Appln. No.: 09/732,705
Shinji KOYANO, et al.
SM Tel. No.: (202) 293-7060
SM Fax. No.: (202) 293-7860
Appendix 1

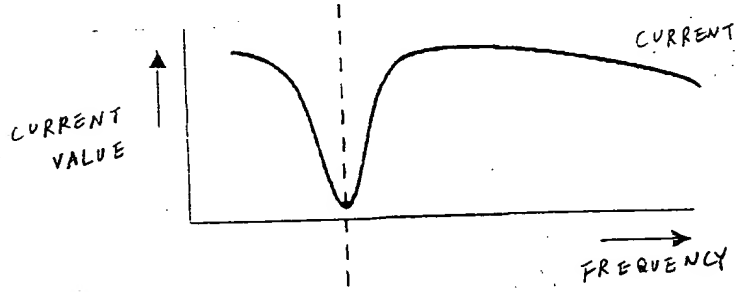
APPENDIX 1

1-A CHARACTERISTIC OF ORDINARY SPEAKER

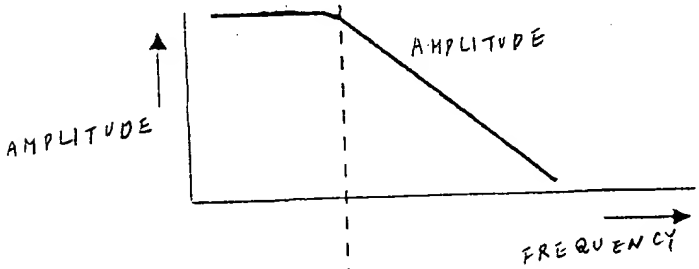
- FREQUENCY - SOUND PRESSURE LEVEL
- FREQUENCY - IMPEDANCE



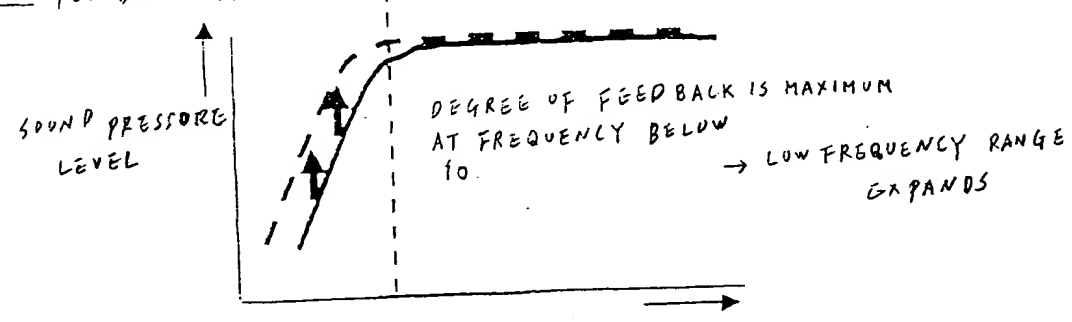
- FREQUENCY - CURRENT VALUE



- FREQUENCY - AMPLITUDE

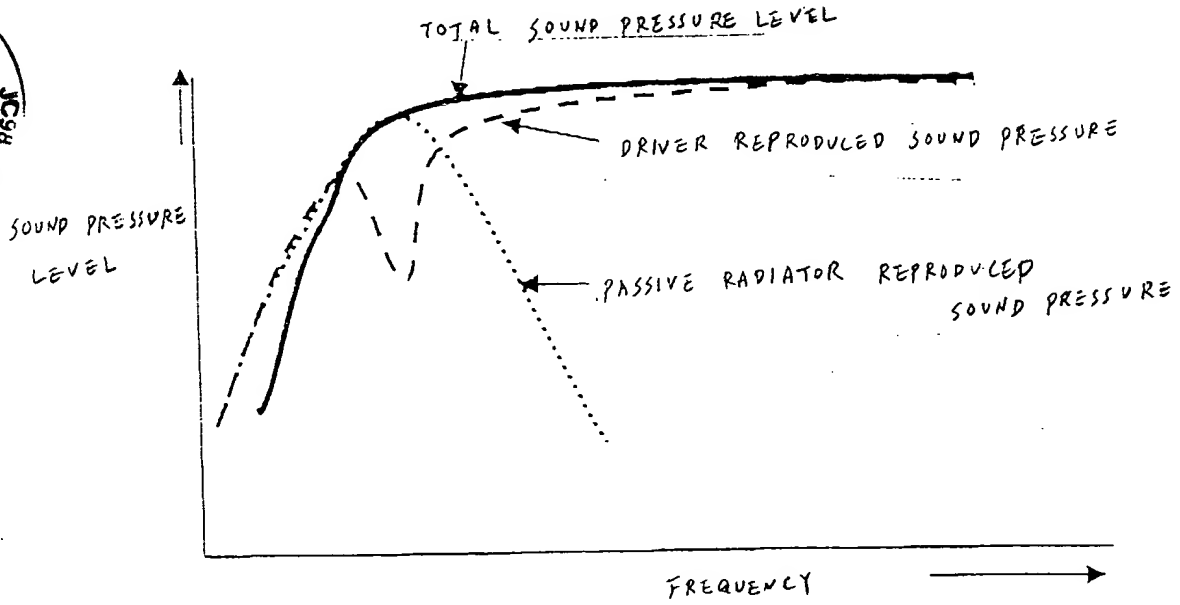


1-B CHARACTERISTIC OF AMPLITUDE POSITIVE FEEDBACK DRIVING

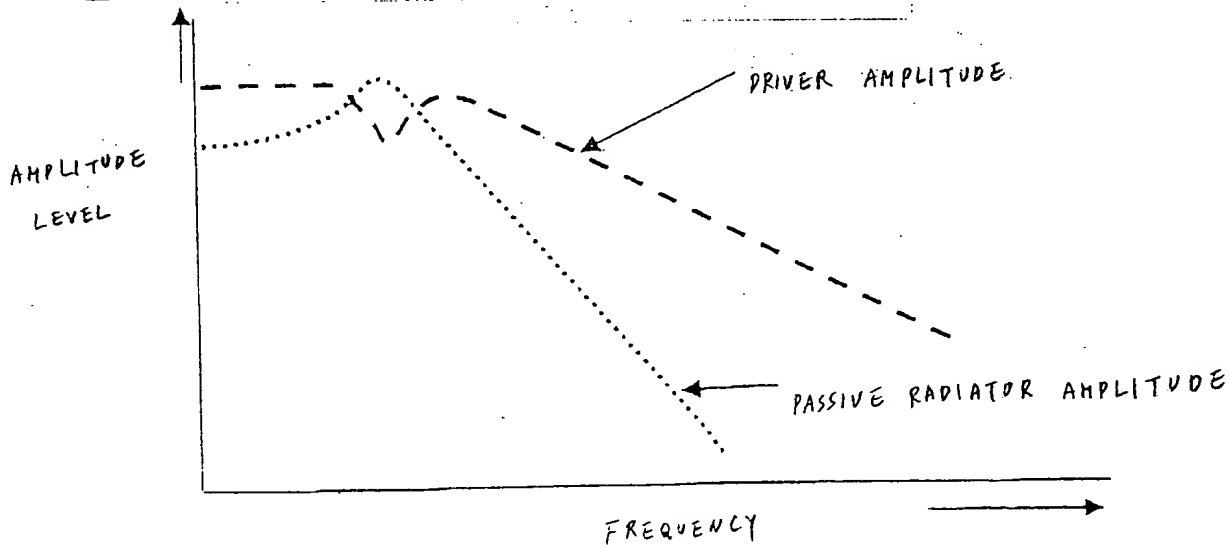


APPENDIX 2

2-A REPRODUCED SOUND PRESSURE OF DRIVER AND PASSIVE RADIATOR



2-B AMPLITUDE OF DRIVER AND PASSIVE RADIATOR



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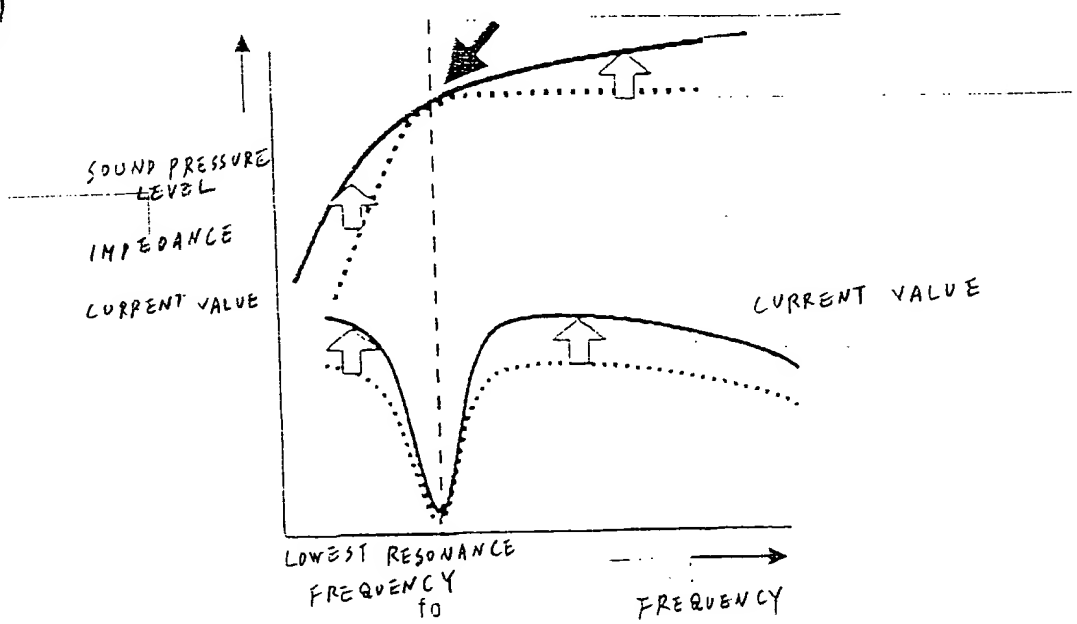
APPENDIX 3

CURRENT POSITIVE FEEDBACK OPERATION (NEGATIVE IMPEDANCE DRIVING)

→ WHEN CURRENT FLOWS, THE CURRENT FURTHER FLOWS OWING TO POSITIVE FEEDBACK

→ DEGREE OF FEEDBACK IS MINIMUM AT f_0



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Additional Appendix

ADDITIONAL

APPENDIX : EQUIVALENT CIRCUIT OF PASSIVE RADIATOR AND ITS OPERATION

VOLTAGE F : DRIVING FORCE

CURRENT I : VIBLATING SPEED

R_{drive} : EQUIVALENT MECHANICAL RESISTANCE OF DRIVER VIBRATING SYSTEM

L_{drive} : EQUIVALENT MASS OF DRIVER VIBRATING SYSTEM

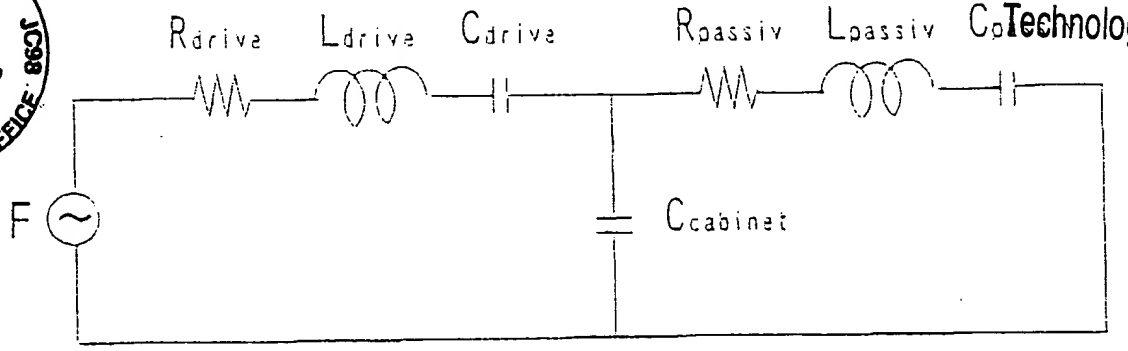
C_{drive} : EQUIVALENT COMPLIANCE OF DRIVER VIBRATING SYSTEM

R_{passiv} : EQUIVALENT MECHANICAL RESISTANCE OF PASSIVE RADIATOR VIBRATING SYSTEM

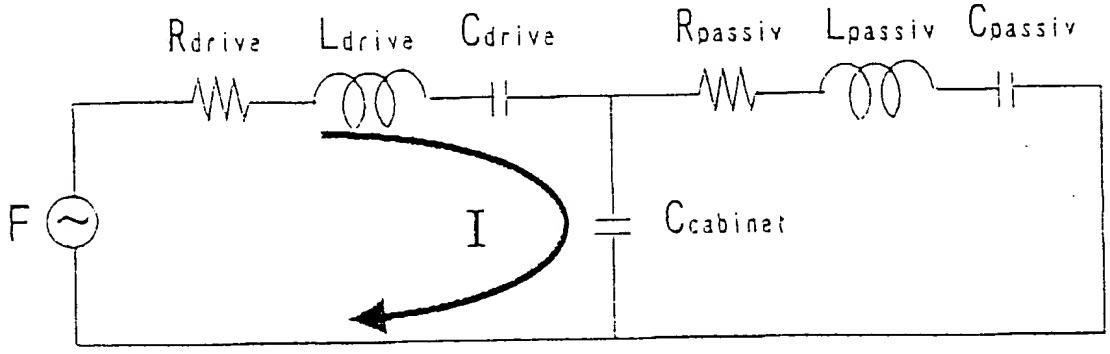
L_{passiv} : EQUIVALENT MASS OF PASSIVE RADIATOR VIBRATING SYSTEM

C_{passiv} : EQUIVALENT COMPLIANCE OF PASSIVE RADIATOR VIBRATING SYSTEM

$C_{cabinet}$: EQUIVALENT COMPLIANCE OF CABINET



① FREQUENCY HIGER THAN RESONANCE FREQUENCY:
ONLY DRIVER VIBRATES, BUT PASSIVE RADIATOR DOES NOT VIBRATE



③ RESONANCE FREQUENCY: CABINET COMPLIANCE AND PASSIVE RADIATOR PRODUCE PARALLEL RESONANCE AND AMPLITUDE OF PASSIVE RADIATOR BECOMES MAXIMUM. OWING TO PARALLEL RESONANCE, IMPEDANCE BETWEEN (A) AND (B) IN EQUIVALENT CIRCUIT INCREASES AND DRIVER AMPLITUDE DECREASES.